

## 03050208-110

(*Calibogue Sound*)

### General Description

Watershed 03050208-110 is located in Beaufort County and consists primarily of *Calibogue Sound* and its tributaries, which include the *May River*, the *Cooper River*, and *Broad Creek*. The watershed occupies 80,668 acres of the Coastal Zone region of South Carolina. The predominant soil types consist of an association of the Bohicket-Lynnhaven-Lakeland-Chipley series. The erodibility of the soil (K) averages 0.08, and the slope of the terrain averages 2%, with a range of 0-6%. Land use/land cover in the watershed includes: 35.2% water, 33.8% forested land, 9.7% nonforested wetland, 8.1% urban land, 7.4% forested wetland, 3.8% barren land, and 2.0% agricultural land.

The May River originates near the Town of Bluffton and accepts drainage from Stony Creek, Rose Dew Creek, Bull Creek (Savage Creek), and Bass Creek before joining Mackay Creek (Skull Creek, Jarvis Creek, Whooping Crane Pond, Golden Bear Pond, Old House Creek) to form Calibogue Sound. Mackay Creek connects Calibogue Sound to Port Royal Sound. Bull Creek (Hoophole Creek) connects the May River to the Cooper River. The Cooper River also accepts drainage from Ramshorn Creek (which connects to the New River Watershed) before flowing into Calibogue Sound. Streams draining directly into the sound include Bryan Creek (Barataria Creek), Big Savannah Pond, Little Savannah Pond, Hubert Pond, Broad Creek (The Folly, Point Comfort Creek, Boggy Gut), Calibogue Creek, and Braddock Cove. There are a total of 33.7 acres of lake waters and 13,453.3 estuarine acres in this watershed, all classified SFH with a few exceptions. The May River, Bull Creek, and the Cooper River from the New River to Ramshorn Creek and their tributaries are classified ORW.

### Surface Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
MD-016	W	ORW/SFH	MOUTH OF MAY RIVER, 1.0MI W OF CHANNEL MARKER 29
MD-174	P	SFH	BROAD CREEK OPPOSITE END OF S-07-80
MD-175	P	SFH	CALIBOGUE SOUND AT MOUTH OF COOPER RIVER NEAR RED BUOY 32

***May River (MD-016)*** – Aquatic life and recreational uses are fully supported. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter.

***Broad Creek (MD-174)*** – Aquatic life uses are fully supported. This is a tidally influenced system with marsh drainage, which are often characterized by naturally low dissolved oxygen concentrations. Although dissolved oxygen excursions were noted, they were typical of values seen in such systems and are considered natural, not standards violations. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported.

***Calibogue Sound (MD-175)*** – Aquatic life uses are fully supported. This is a tidally influenced system with marsh drainage, which are often characterized by naturally low dissolved oxygen concentrations.

Although dissolved oxygen excursions were noted, they were typical of values seen in such systems and are considered natural, not standards violations. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are fully supported.

## Shellfish Monitoring Stations

<b><u>Station #</u></b>	<b><u>Description</u></b>
19-01	MAY RIVER SOUTH OF PALMETTO BLUFF, MARKER #8
19-02	UNNAMED CREEK AT JACK CROW ISLAND IN COOPER RIVER
19-03	RAMSHORN CREEK AT COOPER RIVER
19-09	BULL CREEK AT COOPER RIVER
19-11	BULL CREEK AT SAVAGE CREEK
19-12	BULL CREEK AT MAY RIVER
19-16	MAY RIVER BEHIND BLUFFTON OYSTER CO-OP
19-17A	COOPER RIVER MARINA AT EDGE OF CSZ
19-18	MAY RIVER BELOW DRAINAGE CANAL AT MARKER #11
19-19	MAY RIVER AT FIRST DOCK IN HEADWATERS PAST BLUFF
19-24	MAY RIVER AT SOUTHERN END OF CRANE ISLAND
19-25	MAY RIVER AT GREEN MARKER #25
20-01	BRADDOCK POINT – SOUTH END OF HILTON HEAD ISLAND
20-02	CALIBOGUE SOUND, MARKER #32
20-03	SHARK BANK AND BROAD CREEK – CSZ SEA PINES WWTP, MARKER #2
20-04A	BROAD CREEK AT PALMETTO BAY MARINA CSZ – EBB TIDE (COMBINED 20-04E AND 20-04F)
20-05	MAY RIVER AT CALIBOGUE SOUND
20-06	JARVIS CREEK AT CALIBOGUE SOUND
20-07	BUCKINGHAM LANDING AT BRIDGE
20-10	SKULL CREEK AT SMALL CREEK FROM MARINER’S COVE
20-11	SKULL CREEK, MARKER #19
20-12	SKULL CREEK BEHIND HILTON HEAD SEAFOOD COMPANY
20-15	BROAD CREEK AT LAWTON CREEK
20-15A	BROAD CREEK AT CALIBOGUE SOUND – NORTH END OF BUCK ISLAND
20-16	CREEK BEHIND LYNN SMITH’S OYSTER PLANT AT BROAD CREEK
20-16A	CREEK APPROXIMATELY 50 YDS SOUTHEAST OF STATION 20-16
20-17B	BROAD CREEK AT BROAD CREEK MARINA CSZ
20-18	BROAD CREEK AT SHELTER COVE MARINA
20-19A	BROAD CREEK AT HARBOR TOWN MARINA CSZ (COMBINED 20-19E AND 20-19F)
20-20A	MOSS CREEK MARINA CSZ (COMBINED 20-20E AND 20-20F)
20-22	OLD HOUSE CREEK AT CALIBOGUE SOUND
20-23	FIRST MAJOR “Y” IN JARVIS CREEK
20-24	FIRST MAJOR CREEK RIGHT AFTER MARKER #18
20-25	BROAD CREEK AT CONFLUENCE OF CHANNEL AT OLD OYSTER FACTORY
20-26	NORTHWEST OF S. BEACH MARINA CLOSURE ZONE

## Groundwater Quality

<u>Well #</u>	<u>Class</u>	<u>Aquifer</u>	<u>Location</u>
AMB-092	GB	TERTIARY LIMESTONE	HILTON HEAD ISLAND

All water samples collected from ambient monitoring well **AMB-092** met standards for Class GB groundwater.

## NPDES Program

### *Active NPDES Facilities*

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD)</i>	<i>NPDES# TYPE COMMENT</i>
WHOOPIING CRANE POND CONSERVANCY HILTON HEAD #1 PSD WWTP PIPE #: 004 FLOW: 0.50	SC0046191 MAJOR DOMESTIC WETLAND
CYPRESS CONSERVANCY HILTON HEAD #1 PSD WWTP PIPE #: 005 FLOW: 0.25	SC0046191 MAJOR DOMESTIC WETLAND
GOLDEN BEAR POND/INDIGO RUN HILTON HEAD #1 PSD WWTP PIPE #: 006 FLOW: 1.423	SC0046191 MAJOR DOMESTIC WETLAND
BOGGY GUT & WHITE IBIS MARSHES SOUTH ISLAND PSD PIPE #: 001 FLOW: 5.0	SC0042501 MAJOR DOMESTIC WETLAND
CALIBOGUE SOUND SOUTH ISLAND PSD/WTP PIPE #: 001 FLOW: M/R	SC0047724 MINOR DOMESTIC

## Nonpoint Source Management Program

### *Land Disposal Activities*

#### Landfill Facilities

<i>LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
MALPHRUS CONSTRUCTION COMPANY INDUSTRIAL	IWP-203 INACTIVE
MELROSE PLANTATION TRANSFER STATION TRANSFER STATION	072492-6001 ACTIVE
HAIG POINT TRANSFER STATION TRANSFER STATION	072496-6001 ACTIVE

### Land Application Sites

<i>LAND APPLICATION SYSTEM</i>	<i>ND#</i>
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<i><b>FACILITY NAME</b></i>	<i><b>TYPE</b></i>
GOLF COURSES WATER OAK UTILITY/MOSS CK PLANTATION	ND0014567 DOMESTIC
SPRAY IRRIGATION HILTON HEAD #1 PSD	ND0065854 DOMESTIC
GOLF COURSES BJW&SA/BLUFFTON REG.WWTP	ND0069191 DOMESTIC
SPRAYFIELD BRIGHTON BEACH MHP	ND0000566 DOMESTIC
SPRAYFIELDS BROAD CREEK PSD	ND0063100 DOMESTIC
GOLF COURSE SOUTH ISLAND PSD/LONG COVE	ND0013528 DOMESTIC
GOLF COURSE SOUTH ISLAND PSD/WEXFORD PLANT	ND0017141 DOMESTIC
SPRAYFIELDS SOUTH ISLAND PSD	ND0064033 DOMESTIC
GOLF COURSE HAIG POINT/MELROSE WWTP	ND0062286 DOMESTIC

### ***Mining Activities***

<i><b>MINING COMPANY MINE NAME</b></i>	<i><b>PERMIT # MINERAL</b></i>
AE CLELAND CONSTRUCTION, INC. DAVIS ROAD LOT 1-A	1244-13 SAND/CLAY
JEJ CONSTRUCTION COMPANY, INC. WARD #1 MINE	1088-13 SAND
HADWIN CONSTRUCTION COMPANY PRITCHARDVILLE PIT	1066-13 SAND
BUNTON CONSTRUCTION WALTER GARFIELD MINE	1205-13 SAND/CLAY
T.H. COBERN CONSTRUCTION COMPANY COBERN MINE	1182-13 SAND/CLAY
DOLPHIN MANAGEMENT INC. LAKE CHRISTINA	1360-13 SAND/SANDCLAY

### **Growth Potential**

There is a high potential for growth in this watershed, which contains portions of the Towns of Bluffton and Hilton Head. The Town of Bluffton is an unincorporated area experiencing substantial growth. Del Webb's Sun City retirement community development near Bluffton has added tremendous

residential and commercial growth to the area. Between 25 and 50% of the total land area is suitable for septic system installations; and another 25% or less is classified as marginally suitable. Beaufort-Jasper Water and Sewer Authority has extended water and sewer services to the area to provide for the growth. They were then able to extend the services over to Hilton Head, where the natural aquifer is becoming shallow and salty. The area along U.S. Highway 278 en route from Bluffton to Hilton Head is a high growth residential and commercial corridor. There are numerous golf and/or residential developments, and plans to develop nearby areas in a similar fashion. The new toll road that by-passes a portion of U.S. Highway 278 diverts the heavy commercial tourism traffic to more residential areas and the beaches. Hilton Head Island has adequate sewer service, but is trying to control growth due to size limitations of the highly developed island. However, this area is still projected as a growth area due to the following plans: (1) Beaufort and Jasper Counties are cooperating to construct a regional wastewater treatment plant in the Cherry Point area; (2) the regional water and sewer authority has proposed a regional water supply project to serve southern Beaufort and Jasper Counties with the Savannah River as the source; (3) a four lane, limited access highway connecting Hilton Head Island with I-95 will be built in the next few years; and (4) Union Camp has plans to develop at least a portion of its holding in southern Beaufort County.